UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/657,641	09/07/2000	Jun Enomoto	Q58746	2081

7590 06/04/2004

Sughrue Mion Zinn MacPeak & Seas PLLC
2100 Pennsylvania Avenue NW
Washington, DC 20037-3202

EXAMINER	
LAROSE, COLIN M	
ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/657,641	Applicant(s) ENOMOTO, JUN	
	Examiner Colin M. LaRose	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32 and 35* is/are rejected.

7)☒ Claim(s) *33 and 34* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Arguments and Amendments

1. Applicants' amendments and/or arguments filed 10 March 2004, have been entered and made of record.

Response to Amendments and Arguments

2. Applicant's arguments with respect to claims 1 and 7 (see paper 8, pages 9-10) are persuasive but are now moot in view of the new grounds of rejection below.

Claim Objections

3. The previous claim objections under 37 CFR §1.75(a) and (d)(1) are withdrawn.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 2-5, 7-11, 13, and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,204,858 by Gupta in view of U.S. Patent 5,048,103 by Leclerc et al. ("Leclerc").

Regarding claims 1 and 7, Gupta discloses a method (figure 4) of setting a region to be adjusted to redeye correction in which a redeye in an image that has been produced in shooting is corrected into an eye having a pupil of a specified color, comprising the steps of:

automatically extracting only the redeye from a first region including the redeye which has preliminarily been designated by an operator or automatically (a user designates a first area ("first region") at step 410 and then a candidate area (which is assumed to contain only a redeye) is automatically extracted from the first area; column 3, lines 12-26); and

setting a second region to be subjected to redeye correction for correcting a color of the pupil into said specified color of the pupil (step 420: the extracted candidate area, which contains a redeye, is set as a "second region" for pupil-color correction).

Further regarding claim 7, Gupta discloses converting the second region into the eye having the pupil of said specified color to correct the redeye (figure 9).

Gupta discloses prompting the user to verify whether the automatic extracting step successfully extracted an actual redeye region (430, figure 4).

However, Gupta is silent to setting the second region manually in case the redeye cannot be extracted automatically, as claimed.

Leclerc discloses a method for the automatic resetting of images. In the background section, Leclrec poses the problem of aligning two medical images. Leclerc establishes that the prior art facilitates the alignment by detecting various landmarks in the images. Then, distortion of the images is corrected according to the observed distortion in the landmarks. Column 1, line 62 through column 2, line 7.

Leclerc identifies a problem associated with identifying the landmarks automatically: "In practice, automatic methods fail at the stage for selecting and the stage for validating the

landmarks." Column 2, lines 46-48. When the automatic detection of landmarks fails, Leclerc discloses that the selection and validation is performed manually. Column 2, lines 48-52.

Thus Leclerc discloses the conventional concept of having a user manually designate objects of interest in an image when automatic detection methods fail.

Although Leclrec's disclosure is directed to a different invention than that of Gupta, both Gupta and Leclerc are related to the field of image processing, and more specifically, they are both concerned with extracting objects of interest from an image.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gupta by Leclerc to set the second region manually in case the automatic extraction fails since Leclerc discloses that, conventionally, objects of interest in an image are automatically extracted, but when automatic extraction fails, the user performs manual designation.

Regarding claims 2 and 8, Gupta discloses that the first region is a rectangular frame surrounding an eye (column 3, lines 12-17).

Regarding claims 3 and 9, Gupta discloses the image frame is designated as said first region using shooting information (i.e. the frame is designated using the image's content, or "shooting information").

Regarding claims 4 and 10, Gupta discloses at least one of each eye can be designated by designating one eye by means of enclosing the eye with an area in a rectangular shape (column 3, lines 12-17).

Regarding claims 5 and 11, Gupta discloses the setting step of said second region is performed on image data which has been subjected to color adjustment (column 3, lines 27-34).

Regarding claim 13, Gupta discloses setting the second region and performing the redeye correction on an RGB color image (which has been shot as a color image). Gupta does not disclose converting the corrected color image into a monochrome image for output. However, at the time of the invention, converting an RBG image to a monochrome image was well-known and it would have been obvious to those skilled in the art to convert the color image into monochrome for the purposes of saving storage space, or for viewing the image in one color, or for printing in grayscale, etc.

Regarding claims 23 and 26, Gupta discloses judging, as claimed (430, figure 4).

Regarding claim 24, the combination of Gupta and Leclerc discloses judging to determine if the redeye region has been automatically extracted (430, figure 4 of Gupta) and then setting the second region manually if the automatic extraction has failed (column 2, lines 46-52 of Leclerc).

Regarding claims 25 and 27, Gupta discloses a user prescans the image to designate the first region (column 3, lines 12-17) and then the system finely scans the image to form the second region corresponding to the candidate area (column 3, lines 18-26). That is, the user prescans the image visually to obtain a first region, then the system electronically scans the image finely to acquire the second region.

6. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta in view of Leclerc, and further in view of U.S. Patent 6,009,209 by Acker et al. ("Acker").

Regarding claim 6 and 12, Gupta is silent to the claimed limitations.

Acker discloses a similar redeye correction system. In particular, Acker discloses that when a redeye region is set, a position of the redeye is roughly designated in a verification screen (i.e. the position of the redeye is shown on a display: figure 2A and column 6, lines 7-11; and the area of the redeye is roughly designated so that it may be zoomed in on) for determining an image processing condition including at least one of color and density (i.e. the "conditions" (e.g. the areas) of the redeye processing are determined by the displayed region of the redeye), a display screen is replaced with an output image and thereafter setting said second region is performed (i.e. the zoomed image on the screen replaces the original image, and the user sets the second region).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gupta and Leclerc by Acker to roughly designate the position of the redeye on the screen and replace the screen with a an output image, as claimed, since displaying the image and region-setting results to a user facilitates the redeye designation process.

7. Claims 14-22 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta and Leclerc, as applied to claim 7 above, and further in view of U.S. Patent 5,432,863 by Benati et al. ("Benati").

Regarding claim 14, Gupta is silent to the redeye designation by setting said second region being performed on first image data while said redeye correction being performed on second image data, as claimed.

Benati discloses a similar redeye detection/correction system. In particular, Benati teaches detecting the redeye region in a first image, and then correcting the redeye region in a second image, based on the location of the redeye in the first image. Figure 3 shows the detection phase 200 is performed on the input image 100. Figure 4 shows that the input image is converted into a lower (310) or higher (330) resolution image on which redeye correction (380) is performed.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gupta and Leclerc by Benati to achieve the claimed invention since Benati teaches that "one might wish to perform the [redeye] detection phase in some image resolution, but perform the fix phase in another" (column 7, lines 30-32).

Regarding claims 15-17, Benati teaches the first image has fewer bits, is smaller, and has lower resolution than the second image (i.e. the second image has higher resolution (figure 4, 330), and therefore has more bits and is larger).

Regarding claim 18, Benati discloses that said first image data is image data of a partial image of an image represented by said second image data (i.e. the first image is a representation of the second image, therefore, the first image data is at least "a partial image of an image represented by said second image data").

Regarding claim 19, Benati discloses that the second image data is produced from the first image data (i.e. the second image is a lower- or higher-resolution version of the first image).

Regarding claim 20, Benati teaches the first image data is a prescanned image (i.e. the first image was scanned by a scanner 10 (figure 1) at some resolution) whereas said second

image data is fine scanned image data (i.e. the second image is fine scanned image data, which is at a higher resolution (column 7, lines 49-51)).

Regarding claim 21, Benati discloses the redeye designation is performed on said first image data (200, figure 2) and the redeye correction is performed on said second image data (380, figure 4), said result of the redeye designation is reserved separately from said first image data and thereafter utilized for said second image data (Benati creates, from the input image, a binary bitmap that designates the location of only the defective pixels; the result of the designation is then utilized for the second image data to denote which pixels are to be corrected; column 4, lines 29-42).

Regarding claim 22, Benati discloses the redeye designation information is at least one of redeye position information and redeye region information (e.g. figure 9 shows bitmaps which designate the position of the redeye).

Regarding claim 32, Gupta is silent to the shooting information being determined from a magnetic recording formed on a film.

Benati discloses a similar redeye correction system. In particular, Benati discloses digitizing (10, figure 1) an image formed on film using a camera in order to digitally correct the image.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gupta and Leclerc by Benati to determine the shooting information (i.e. image content) from a magnetic recording, since Benati shows that images are conventionally captured onto film and then converted into digital images for redeye processing.

Regarding claim 35, Benati discloses the first and second image data are image data of said image having said red eye that has been produced in shooting (figure 1: the image data is created from a scanned photograph).

8. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta in view of Leclerc, as applied to claim 3, and further in view of U.S. Patent 6,210,048 by Tanaka et al. ("Tanaka"), Benati and U.S. Patent 6,407,777 by DeLuca.

Regarding claim 30, Gupta and Leclrec are silent to the shooting information including information regarding whether a flash is used.

DeLuca discloses a similar system for redeye correction. In particular, DeLuca discloses performing redeye correction only if certain conditions indicate the possibility of redeye being present (210, figure 8). One of the conditions is the usage of a flash for capturing ("shooting") the image (310, figure 9).

Benati discloses a redeye correction system wherein images on film (15, figure 1) are converted into digital images by a scanner (10, figure 1) for the purposes of digitally correcting the redeye effects.

Tanaka discloses a camera. In particular, Tanaka discloses that additional information, such as information on whether a flash was used, is recorded onto the film when a picture is taken (column 6, lines 45-49).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gupta and Leclerc by DeLuca, Benati and Tanaka to achieve the claimed invention by including information on whether a flash was used with an image recorded onto film by

conventional means since DeLuca discloses that such information is helpful in determining whether redeye correction should be performed on an image, and Tanaka teaches that flash information is retained by recording it onto film as the picture is taken, and in order to correct an image taken by a conventional film-loaded camera, Benati teaches digitizing the image using a scanner.

Regarding claim 31, Tanaka teaches the shooting information is recorded onto and determined from the film.

9. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta in view of Leclerc as applied to claims 27 and 7 above, and further in view of U.S. Patent 5,986,642 by Ueda et al. ("Ueda").

Regarding claims 28 and 29, Gupta and Leclerc are silent to displaying the fine scanned image before converting next to the fine scanned image after converting, and then having the user select the suitable image for output.

Ueda discloses an image processing system to aid a user in correcting an image. In particular, Ueda discloses displaying a corrected image (1004, figure 1) next to an original image (1002, figure 1). The user is then able to visually compare the corrected and uncorrected images and select the more desirable image for output (column 1, lines 62).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gupta and Leclerc by Ueda to achieve the claimed invention, since Ueda teaches that displaying corrected and uncorrected images adjacent to one another, and then allowing the user

to select the more suitable image is advantageous in that it is easier for a user to adjust the color of an original image (column 1, lines 29-40).

Allowable Subject Matter

10. Claims 33 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 33, Gupta and Leclerc are silent to setting the second region and correcting the redeye on first image data for display, and then setting the second region and correcting the redeye on a second image data for printing, as claimed.

U.S. Patent 6,407,777 by DeLuca discloses a similar redeye correction system. As shown in figure 4, first image data is displayed to a user for the purposes of designating the redeye region and correcting the redeye. After the user presses the "remove red eye" button, the image is corrected and displayed. Then, the user either verifies the correction ("next eye"), or nullifies it ("undo"). After the image is correction and verified on the display, it is printed (16) as shown in figure 1.

However, DeLuca does not appear to disclose performing region-setting and redeye correction on first image data, which is displayed and verified, and then performing region-setting and redeye correction on second image data, which is printed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (703) 306-3489.

The examiner can normally be reached Monday through Thursday from 8:00 to 5:30. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au, can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (703) 306-0377.

CML
Group Art Unit 2623
1 June 2004

AMELIA M. AU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600